

A NEW SPECIES OF THE GENUS AGDISTIS FROM CHINA (LEPIDOPTERA, PTEROPHORIDAE)

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Abstract A new species, *Agdistis zhengi* Hao et Li, is described in this paper. The adult of the new species is photographed and the genital structures of both sexes are illustrated.

Key words Lepidoptera, Pterophoridae, Agdistinae, *Agdistis*, new species, China.

Agdistis Hübner, [1825] 1816 is the only genus of the subfamily Agdistinae (Arenberger, 1995; Gielis, 1993, 1996). It includes 101 described species worldwide, with 73 species distributed in the Palaearctic Region (Gielis, 2003; Li, Hao & Wang, 2003). Hao & Li (2003) reviewed the genus and recorded six species from China. This paper describes one new species based on the specimens collected from Dagang, Tianjin. All the studied specimens are deposited in the Insect Collection, College of Life Sciences, Nankai University, Tianjin, China.

Agdistis zhengi sp. nov. (Figs. 1–3)

Adult (Fig. 1). Wing expanse 22.0–26.0 mm. Head greyish brown, with silvery white; margin silvery white; frontal tuft absent. Antenna about 2/5 length of forewing; scape slightly expanded, brown with sparsely silvery white on dorsal surface, greyish white on ventral surface; flagellum greyish brown, densely clothed with short cilia. Labial palpus upcurved aslant, small, about equal to or appreciably shorter than eye's diameter; basal segment short and small, almost hidden in long white scales below eye; second segment with nearly triangularly expanded scale-brush; apical segment very thin, with expanded scale-brush connected with that of second segment; scale-brush silvery white, sparsely mixed with light greyish brown scales, which are especially denser in distal part of apical segment. Thorax darkish brown, clothed with fawn scales; margin and metathorax greyish white. Tegula with basal part fawn, distal part slightly paler. Forewing grey, with scattered greyish brown, slightly dark in "naked field"; costal margin with brown spot at 2/3 and 5/7 respectively, the latter smaller and with another larger brown spot below; "naked field" with a bigger brown spot at peak angle, with five spots below or on lower margin, three basal spots bigger, two distal spots unobvious and near terminal, relations of five spots as follows: second and fourth spots slightly lower than

other three; distance between second and third, between fourth and fifth spots close; second and third spots parallel to fourth and fifth ones, distance between third and fourth longer than that between first and second; inner margin light grey, fringe very short, grey. Hindwing ground colour darker than forewing, with a greyish white band extending from base to central of outer margin, terminal of band (near outer margin) sparsely with brown spots. Legs very slender; femora and tibiae brown, with outside fawn, inside densely silvery white; tarsi with dorsal surface greyish white to silvery white, ventral surface fawn, greyish white to silvery white at tip; spurs greyish white to greyish. Abdomen slender, greyish, scattered with brown; distal portion in female with two bundles of long "hairs" at both sides extending to end.

Male genitalia (Fig. 2). Uncus bifid, asymmetrical, arising from 2/3 of tegumen at ventral surface, basal part rectangular, distal part irregularly shaped: left one deeply concave in broad U shape on posterior margin, both sides curved outside distally, acute at apex, just like an inverted small letter "h"; right one gradually slender to tip, with a finger like process at 1/2 on inside and a long conical process at 3/4 on outside. Tuba sets between uncus, slightly sclerotized, columniform, length about 1.5 times of width. Tegumen large and wide, arched, with a forked process at basal 1/3 of ventral surface, looking like gnathos. Valvae weakly sclerotized, slightly incurved, asymmetrical: left valva with basal part wide, slightly expanded at 1/2, nearly cystiform; distal part gradually thinner to rounded apex; a mastoid process with hairs at central of valva; costal arm sclerotized, about 1/2 length of valva; wider at base, narrowed to 1/4, then slightly wider and curved downward, acute apically, just like a goose head; right valva similar to left one, except with a thin tube-like process at 1/4 on inside; two larger mastoid processes with hairs at 1/2;

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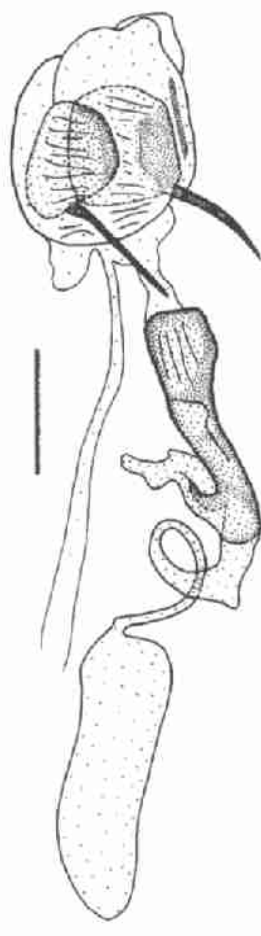
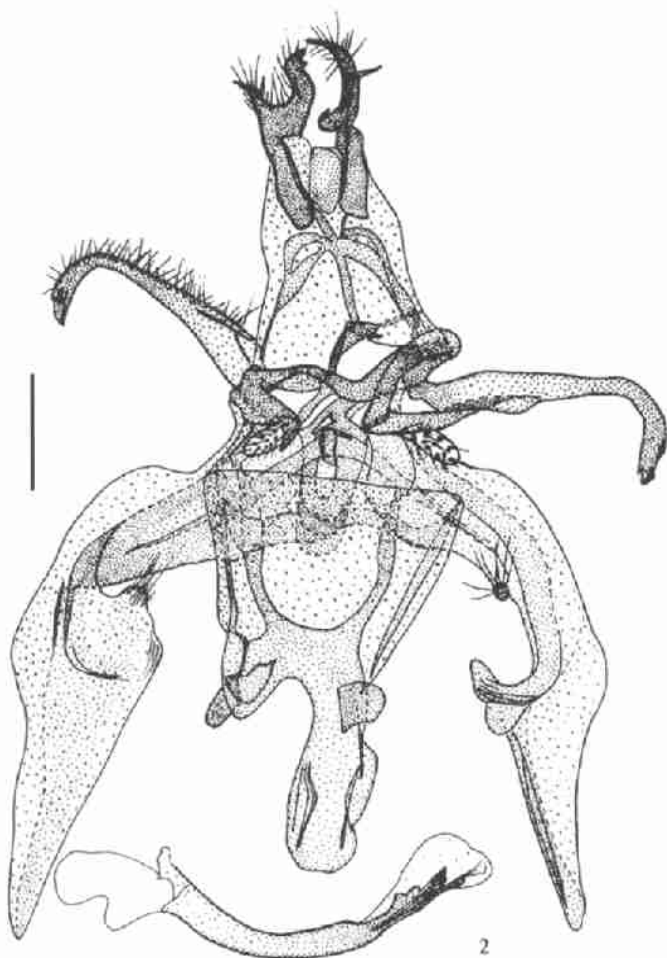
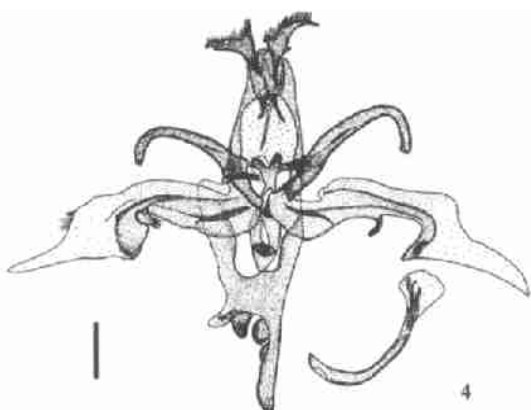
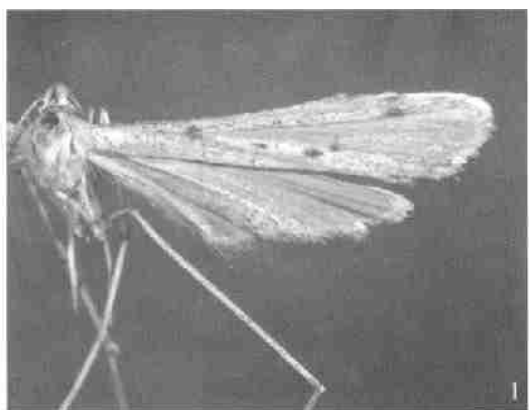
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costal arm similar to left one. Anellus bilobed, small, unobvious. Saccus large, more or less a circular band, round anteriorly. Aedeagus slender, curved, with numerous cornuti in vesica.

Eighth sternite much developed, sclerotized, wider

than tegumen, basal 2/3 nearly trapeziform; dimidiate terminally, strongly prominent; left process about 2/3 length of right one, with a finger-shaped process extending to ventral surface; right one slightly wider and larger, with a semicircular process at base on outside.



Figs 1-4. *Agdistis* spp. 1-3. *A. zhengi* sp. nov. 1. Adult. 2. Male genitalia. 3. Female genitalia. 4. Male genitalia of *A. unirectangula* Hao & Li. Scale bars = 0.5 mm.

Female genitalia (Fig. 3). Papillae anales and apophyses posteriores hidden in terminal of abdomen. Papillae anales moderate, weakly sclerotized, with spines. Apophyses posteriores slender, slightly longer

than papillae anales. Apophyses anteriores absent. Ostium and antrum centrally positioned. Antrum big, often sclerotized; right side with incurve in basal 2/5; distal portion about 2/3 width of basal portion. Ductus

bursae slender, gradually expanding to elliptic bursa copulatrix; ductus seminalis arising from margin of antrum. Corpus bursae without signum.

Holotype ♂, Beidagang Reservoir (38° 43' N, 117° 25' E), Tianjin City, 25 Aug. 2004, collected by XU Jia-Sheng and ZHANG Jia-Liang, genitalia slide no. HSL02693. Paratypes: 5 ♀♀, same data as holotype; 1 ♀, Dagang oil field (38° 50' N, 117° 27' E), Tianjin City, 5 Sep. 2001, collected by YOU Ping.

Distribution. China (Tianjin).

Diagnosis. This species resembles *A. uncipectangula* Hao & Li (Fig. 4) in both appearance and male genitalia, but can be distinguished from the latter by the left uncus concave in broad U shape on posterior margin and acute apically; the anellus bilobed, small and unobvious; the saccus nearly circularly banded, rounded anteriorly; the 8th sternite differently shaped and positioned from those of the latter species.

金羽蛾属一新种记述 (鳞翅目, 羽蛾科)*

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摘要 记录了采自天津的1新种郑氏金羽蛾 *Agdistis zhengi* sp. nov. (图1~3)。该种分布于天津, 与直钩金羽蛾 *A. uncipectangula* Hao & Li (图4) 相似, 但可以通过以下特征与后者区别: 爪形突的左侧一支端部近圆形深凹, 两侧顶端尖, 均向外侧弯曲; 抱器背臂整体看起来象鹅的头部; 阳茎基环

关键词 鳞翅目, 羽蛾科, 金羽蛾亚科, 金羽蛾属, 新种, 中国.

中图分类号 Q969.432.6

Etymology. This new species is named after Professor ZHENG Zhe-Min for his great contribution in the field of entomology.

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两叶, 小而不明显; 囊形突大, 近环带状, 末端圆; 第8腹板末端突起的形状和位置与后者不一致等。文中给出了新种成虫图, 以及雌雄外生殖器特征图。模式标本保存在南开大学生命科学学院昆虫标本室。

新种以著名昆虫学家郑哲民教授的姓氏命名。